

## CLAIMS

What is claimed is:

1. A method for building a session, comprising:  
receiving a first session;  
creating a first runtime of the first session;  
receiving a second session; and  
merging the second session with the first runtime of the first session to create a second runtime.
2. The method of claim 1, further comprising:  
receiving an updated second session; and  
merging the updated second session with the first runtime of the first session to create a third runtime.
3. The method of claim 1, wherein the merging step comprises joining the first and second sessions at tests common to both sessions.
4. The method of claim 1, wherein the merging step comprises computing weights on navigation paths in the second runtime to optimize navigation during execution of the second runtime.
5. The method of claim 1, wherein the step of creating a first runtime comprises establishing first weights associated with the navigation of the first session.

6. The method of claim 5, wherein the step of merging the first runtime with the second session comprises combining the first weights with second weights associated with the navigation of the second session.

7. The method of claim 1, further comprising the step of selecting a best route of navigation of the second runtime based on weights associated with tests in the second runtime.

8. A method for building a session, comprising:  
receiving a first runtime of a first session;  
authoring a second session; and  
merging the second session with the first runtime of the first session to create a second runtime.

9. The method of claim 8, wherein the merging step comprises joining the first and second sessions at tests common to both sessions.

10. The method of claim 8, wherein the merging step comprises computing weights on navigation paths in the second runtime to optimize navigation during execution of the second runtime.

11. The method of claim 8, wherein the step of merging the first runtime with the second session comprises combining first weights associated with the navigation of the first session with second weights associated with the navigation of the second session.

12. The method of claim 8, further comprising the step of selecting a best route of navigation of the second runtime based on weights associated with tests in the second runtime.

13. The method of claim 1, further comprising associating types of analysis with different entry points in the second runtime.

14. The method of claim 8, further comprising associating types of analysis with different entry points in the runtime

15. The method of claim 8, wherein the step of authoring the second session comprises organizing analytic assets in a hierarchy.

16. The method of claim 8, wherein the step of authoring the second session comprises:

assigning a unique identifier to the second session; and

creating a directed acyclic graph of at least one test.

17. The method of claim 16, wherein the step of creating a graph comprises assigning navigation weights between at least two tests.

18. The method of claim 17, wherein the weights are assigned according to one or more of the following factors:

material costs;

labor costs;

engineering feedback regarding system or component operation; and

historic feedback of actual system or component operation.

19. The method of claim 16, further comprising:

authoring the at least one test to include a unique identifier and an agent.

20. The method of claim 19, further comprising:

authoring the agent to include a unique identifier and a graph of beans.

21. The method of claim 19, further comprising:

authoring the agent to include a unique identifier and a graph of rulesets defining an analytic workflow.

22. The method of claim 20, wherein at least one of said beans comprises a unique identifier, and software or machinery that is configured to perform data analysis or to process data for analysis.

23. The method of claim 21, further comprising:

authoring the ruleset to include a unique identifier, a collection of rules able to be executed to perform analysis, and supporting statements that define access to data in support of the analysis.

24. The method of claim 21, wherein at least one of said rules comprises an optional unique identifier, and a statement to enable analysis to be performed.

25. The method of claim 8, wherein the step of authoring the second session includes associating the second session with one or more analysis types defining the kind of analysis performed by the second session.

26. The method of claim 1, further comprising associating the second runtime with one or more analysis data and analysis types defined by the first and second sessions .

27. The method of claim 15, further comprising querying said analytic assets to understand their intent, purpose and analytic function to promote reuse when authoring other analytic assets.